REMARKS

Reconsideration and allowance of the above-referenced application is respectfully requested. Claims 1-3, 12, 14, 34-36, 45, and 48 are amended. Claims 23-33, 51 and 53 are canceled. Claims 1-22, 34-50, 52 and 54 are pending in the application.

Information Disclosure Statements

Applicant respectfully requests under MPEP 609 an initialed copy of the Information Disclosure Statement (IDS) (forms PTO-1449) filed January 7, 2004, as indicated on page 5 of the Final Action, as neither the Final Action nor the USPTO Image File Wrapper have copies of the initialed IDS form PTO-1449 filed January 7, 2004. A copy received by the undersigned via facsimile on October 17, 2007 is not acceptable because the citations are both crossed out and initialed, contra to the requirements of MPEP 609.05(a) and MPEP 609.05(b), rendering unclear whether the references were actually considered. The Examiner is respectfully requested to initial a clean copy of the form PTO-1449 filed January 7, 2004 (or in the alternative, the form PTO-1449 filed July 14, 2006).

In the alternative to the Examiner initialing a clean copy of the form PTO-1449 filed January 7, 2004, Applicant requests under MPEP 609 an initialed copy of the IDS filed July 14, 2006, which was submitted in accordance with §1.97(c)(2). The IDS filed July 14, 2006 does identify the relevant pages of the publications, namely all the pages. No concise explanation of relevance is further required because the publications are in English (see 37 CFR §1.98(3)(1)). Further, relevance of all the pages is established at page 1, lines 20-23 for the Internet Draft by Johnson et al.,[1] and at page 11, lines 1-5 of the specification for the UML Specification.[2] Neither the Patent Office Rules nor the MPEP impose a limit on the size of references submitted in an Information Disclosure Statement. Hence, an initialed copy of the July 14, 2006 form PTO-1449 is respectfully requested.

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[1] A "Mobile IPv6" protocol is disclosed in an Internet Draft by Johnson et al., entitled "Mobility Support in IPv6", available on the World Wide Web at the address: http://www.ietf.org/internet-drafts/draft-ietf-mobileip-ipv6-24.txt (***the disclosure of which is incorporated in its entirety herein by reference***).

[2] Figure 3 is written in accordance with the Uniform Modeling Language (UML) Specification Ver. 1.5, March 2003, published by the Object Management Group and available

Applicant further requests under MPEP 609 an initialed copy of the IDS filed June 28, 2006, which was submitted in accordance with 37 CFR §1.97(c)(1) and §1.97(e)(1).

The Claim Amendments

Each of the independent claims have been amended to clarify that the claimed network node ***synchronizes*** detected attribute information (or world objects) with other network nodes, and that the claimed network node and the other network nodes generate their ***respective decisions*** (or optimizations) ***autonomously of each other***. The claims as amended also specify that the claimed synchronizing enables the decisions by the network node to be ***coordinated*** with the other network nodes.

As described in the specification, each network node operates ***autonomously*** in executing optimization of routing metrics (or executing a decision) (see, e.g., page 4, lines 5-9 and 20-28; page 6, line 16-20; page 8, lines 1-14; page 15, lines 3-13; page 16, lines 17-24; page 18, lines 9-18; page 22, lines 11-18). As such, the claimed network node is illustrated in the specification as a "wireless and autonomous robotic mobile access point" (e.g., page 6, lines 19-20; page 16, lines 28-29), such that the network node can execute its own decisions without the necessity of receiving directives or commands from another network node, *i.e.,* each network node is configured for executing decisions independent of any external control from another network node.

The independent claims also specify that the claimed synchronizing enables the decisions by the network node to be ***coordinated*** with the other network nodes. Hence, the network node executes decisions (optimizes routing metrics) ***autonomously*** in that it does not rely on any

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on the World Wide Web at the website address "http://www.omg.org/uml" and more specifically at the address "http://www.omg.org/docs/formal/03-03-01.pdf", ***the disclosure of which is incorporated in its entirety herein by reference.***

external control from another network node, while at the same time ***coordinating*** the decisions (the movement directive) with other network nodes.

As described in the specification:

> Hence, the routing resources of each mobile node include movement of its physical platform, and all factors and consequences associated with executing decisions related to movement, as part of the decision-making process to determine how to respond to inputs, including how to route data packets. Each of these factors are also shared among the mobile nodes 12 ***to provide a level of understanding between all the mobile nodes 12 as to the state of the network 10 from the perspective of each of the individual nodes 12.***
>
> Hence, ***each of the mobile nodes 12 decide how to route packets, and move their respective mobility platforms***, based on the available information from local sensors and *information shared between the other mobile nodes*. Consequently, ***the mobile network 10 becomes a dynamic entity*** where the individual mobile nodes 12 interact to route packets, establish connections among each other, and move at selected velocities as needed, based on shared information and detected information.
>
> Hence, the mobile network 10 can be deployed within a geographic area ***without actually programming the geographic topology or network topology within the mobile nodes.***
>
> (Page 8, lines 1-14).

These and other features are neither disclosed nor suggested in the applied prior art.

The foregoing amendments render moot the rejection of claims 1-2, 4-11, 12-13, 15-22, 34-35, 37-50, 52 and 54 under 35 USC §102(e) in view of U.S. Patent Publication No. 2004/0134336 by Solomon. Further, its is respectfully submitted that the rejection fails to demonstrate Solomon includes the claimed world object database including smart world objects, as claimed. The naked reference to object-relational databases in para. 176 is insufficient to provide a disclosure of the specific smart world objects that are a subclass of the world objects and configured for ***generating decisions***.

In addition, Solomon neither discloses nor suggests the claimed network node ***synchronizing*** with world objects (or detected attribute information) with the other network nodes, as claimed. To the contrary, Solomon describes deployment of "a distributed network of mobile robotic vehicles (MRVs) in a **centralized way**" (para. 17, lines 3-4), where a "swarm" of MRVs (hundreds or thousands of MRVs) can be divided into smaller squads for specific tactical attacks (para. 20).

In all cases, however, "both the swarm level and the squad level involve hierarchical control in which **a centralized leader controls the drone followers**" (para. 22, lines 1-3). Hence, even though swarms utilize sensors (see, e.g., para. 23), "[t]he sensor data is supplied to the squad or swarm **lead MRVs** (or retransmitted to external computation resources) in order to be analyzed in real time" (para. 24, lines 1-4). In other words, "[t]he squad leader has mission program parameters that specify particular goals and rules," (para. 25, lines 1-2), and "the lead MRV is the dominant player for decision-making. Group 'decisions' are limited to the sensor data supplied by various MRVs" (para. 30, lines 8-10). Consequently, "[t]he geometric configuration and reconfiguration of groups of MRVs are determined by **lead MRVs** by comparing the sensor data with mission program parameters. The leader must calculate the most efficient way to organize the group for an effective mission."

Hence, Solomon describes that all decisions are executed by the **lead MRV** (e.g., an AWACS aircraft, see para. 204) having moral responsibility (see, e.g., para. 10, 22, 169), based on sensor data received by the lead MRV from the drone MRVs (see, e.g., Fig. 16 at 1615 through 1660; Fig. 29 at 2950, Fig. 70 at 7040 and 7045, Fig. 73 at 7360, para. 165, 173, 176, 189, 202, 203, 280, 283). The decisions are implemented by the lead MRV transmitting "simple rules" (e.g., software program code) to the drone MRVs (see, e.g., Fig. 16, Fig. 73 at 7370, and para. 165, 173, 176, 181, 283).

The drone MRVs use the local rules to implement "pure behavior-based methods" (Fig. 17, para. 179, esp. lines 2-4) limited to reacting to sensor data (environmental stimuli) according to the "simple rules" (see, e.g., Figs. 17 at 1740 and Fig. 18 at 1840 and 1850, Fig. 30 at 3050, and para. 149, 152, 165, 179, 207). Solomon also specifies that the "simple rules" executed by the drone MRVs are limited to reactions such as "move towards the center of the pack", "avoid collisions with neighbors" and "follow the leader", which are basic "flocking" principles the combination of which exhibit flocking behaviors (see Fig. 18 at 1830, 1850, Fig. 30 at 3050, para. 181, 207, 217).

Hence, Solomon consistently discloses that the **lead MRV** executes decisions and transmits "rules" to the drone MRVs, and the drone MRVs implement "behaviors" by performing "actions" and "reactions" in response to environmental stimuli (based on sensor data) in accordance with the "rules" from the lead MRV.

Hence, Solomon neither discloses nor suggests the claimed feature of the network node ***synchronizing*** its world objects (detected attribute information) enabling the decisions (movement directive) by the network node to be ***coordinated*** with the other network nodes, where the network node and the other network nodes execute their respective decisions ***autonomously of each other***, as claimed. The naked reference to "sharing of computer resources" in Fig. 2 and para. 160 fails to disclose or suggest the claimed feature that ***each network node*** executes their ***respective*** decisions ***autonomously*** of each other, let alone that the execution of the decision by the network node results in ***optimization of the network node relative to the other network nodes***.

For these and other reasons, the independent claims are patentable over Solomon.

The dependent claims are believed allowable in view of the foregoing.

In view of the above, it is believed this application is in condition for allowance, and such a Notice is respectfully solicited.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-1130, under Order No. 10-004, and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: September 5, 2008